

=> file biosis

FILE 'BIOSIS' ENTERED AT 15:14:09 ON 28 JUL 2003  
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FILE COVERS 1969 TO DATE.  
CAS REGISTRY NUMBERS AND CHEMICAL NAMES (CNS) PRESENT  
FROM JANUARY 1969 TO DATE.

RECORDS LAST ADDED: 23 July 2003 (20030723/ED)

=> d que 162

L60 3417 SEA FILE=BIOSIS ABB=ON PLU=ON "(1 .FWDARW. 3)-.ALPHA." OR  
"1-3-.ALPHA." OR ALPHA 1-3 OR ".ALPHA.-(1 .FWDARW. 3)"  
L61 18 SEA FILE=BIOSIS ABB=ON PLU=ON L60 AND (FIBER OR FIBER OR  
?FILAMENT OR TEXTILE OR FABRIC)  
L62 1 SEA FILE=BIOSIS ABB=ON PLU=ON L61 AND BULKING *1 cite*

=> file textiletech

FILE 'TEXTILETECH' ENTERED AT 15:14:10 ON 28 JUL 2003  
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FILE LAST UPDATED: 5 MAY 2003 <20030505/UP>  
FILE COVERS 1978 TO DATE.

=> d que 163

L63 3 SEA FILE=TEXTILETECH ABB=ON PLU=ON "(1 .FWDARW. 3)-.ALPHA." *3 cites*  
OR "1-3-.ALPHA." OR ALPHA 1-3 OR ".ALPHA.-(1 .FWDARW. 3)"

=> d que 174

L71 52 SEA FILE=TEXTILETECH ABB=ON PLU=ON GLUCOSID?  
L72 24 SEA FILE=TEXTILETECH ABB=ON PLU=ON L71 AND (FIBER OR FIBRE  
OR ?FILAMENT)  
L73 3 SEA FILE=TEXTILETECH ABB=ON PLU=ON L72 AND ALPHA  
L74 1 SEA FILE=TEXTILETECH ABB=ON PLU=ON L73 AND CELLULOSE/TI *1 cite*

=> s 163 or 174

L87 4 L63 OR L74 *4 cites total for Textile tech*

=> file hcaplus

FILE 'HCAPLUS' ENTERED AT 15:14:14 ON 28 JUL 2003  
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FILE COVERS 1907 - 28 Jul 2003 VOL 139 ISS 5  
FILE LAST UPDATED: 27 Jul 2003 (20030727/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d que 154

L19	427	SEA FILE=HCAPLUS ABB=ON	PLU=ON	"(1 .FWDARW. 3)-.ALPHA.-D"
L21	9	SEA FILE=HCAPLUS ABB=ON	PLU=ON	L19 AND (FIBER OR FIBRE)
L22	1041	SEA FILE=HCAPLUS ABB=ON	PLU=ON	"(1 .FWDARW. 3)-.ALPHA."
L23	598	SEA FILE=HCAPLUS ABB=ON	PLU=ON	"1-3-.ALPHA."
L24	598	SEA FILE=HCAPLUS ABB=ON	PLU=ON	"1-3 ALPHA"
L25	3193	SEA FILE=HCAPLUS ABB=ON	PLU=ON	ALPHA 1-3
L26	28	SEA FILE=HCAPLUS ABB=ON	PLU=ON	(L22 OR L23 OR L24 OR L25) AND (FIBRE OR FIBER)
L27	1169	SEA FILE=HCAPLUS ABB=ON	PLU=ON	".ALPHA.-(1 .FWDARW. 3)"
L28	13	SEA FILE=HCAPLUS ABB=ON	PLU=ON	L27 AND (FIBER OR FIBRE)
L29	4	SEA FILE=HCAPLUS ABB=ON	PLU=ON	((L22 OR L23 OR L24 OR L25) OR L27) AND TEXTILE
L30	6	SEA FILE=HCAPLUS ABB=ON	PLU=ON	((L22 OR L23 OR L24 OR L25) OR L27) AND FILAMENT
L51	4	SEA FILE=HCAPLUS ABB=ON	PLU=ON	((L22 OR L23 OR L24 OR L25) OR L27) AND ?FILAMENT
L52	2	SEA FILE=HCAPLUS ABB=ON	PLU=ON	((L22 OR L23 OR L24 OR L25) OR L27) AND FABRIC
L53	421963	SEA FILE=HCAPLUS ABB=ON	PLU=ON	POLYSACCHARIDES+PFT,NT/CT
L54	11	SEA FILE=HCAPLUS ABB=ON	PLU=ON	L53 AND ((L51 OR L52) OR L21 OR L26 OR (L28 OR L29 OR L30))

*CT = controlled terminology*

*NT = narrower term*

*PFT = old, new or "used for" terms*

*11 cites*

=> file wpix

FILE 'WPIX' ENTERED AT 15:14:15 ON 28 JUL 2003  
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FILE LAST UPDATED: 23 JUL 2003 <20030723/UP>  
MOST RECENT DERWENT UPDATE: 200347 <200347/DW>  
DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE

>>> NEW WEEKLY SDI FREQUENCY AVAILABLE --> see NEWS <<<

>>> SLART (Simultaneous Left and Right Truncation) is now available in the /ABEX field. An additional search field /BIX is also provided which comprises both /BI and /ABEX <<<

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GUIDES, PLEASE VISIT:  
[http://www.derwent.com/userguides/dwpi\\_guide.html](http://www.derwent.com/userguides/dwpi_guide.html) <<<

=> d que 177

L75 362 SEA FILE=WPIX ABB=ON PLU=ON "(1 .FWDARW. 3)-.ALPHA." OR  
"1-3-.ALPHA." OR ALPHA 1-3 OR ".ALPHA.-(1 .FWDARW. 3)"  
L76 6 SEA FILE=WPIX ABB=ON PLU=ON L75 AND (FIBER OR FIBRE OR  
?FILAMENT OR FABRIC OR TEXTILE)  
L77 3 SEA FILE=WPIX ABB=ON PLU=ON L76 AND (GLUCAN? OR ?SACCHARID?) 3 cites

=> dup rem 162 187 154 177 *removing duplicate citations*  
FILE 'BIOSIS' ENTERED AT 15:14:57 ON 28 JUL 2003  
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FILE 'WPIX' ENTERED AT 15:14:57 ON 28 JUL 2003  
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PROCESSING COMPLETED FOR L62.  
PROCESSING COMPLETED FOR L87  
PROCESSING COMPLETED FOR L54  
PROCESSING COMPLETED FOR L77

L88 19 DUP REM L62 L87 L54 L77 (0 DUPLICATES REMOVED) *19 citations total*  
ANSWER '1' FROM FILE BIOSIS  
ANSWERS '2-5' FROM FILE TEXTILETECH  
ANSWERS '6-16' FROM FILE HCAPLUS  
ANSWERS '17-19' FROM FILE WPIX

=> d ibib abs 1

L88 ANSWER 1 OF 19 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN  
ACCESSION NUMBER: 1991:407788 BIOSIS  
DOCUMENT NUMBER: BA92:74753  
TITLE: ENZYMATIC SYNTHESIS OF OLIGOALTERNANS.  
AUTHOR(S): PELENC V; LOPEZ-MUNGUIA A; REMAUD M; BITON J; MICHEL J M;  
PAUL F; MONSAN P  
CORPORATE SOURCE: BIOEUROPE S.A., 4 IMPASSE DIDIER DAURAT, 31031 TOULOUSE  
CEDEX, FR.  
SOURCE: SCI ALIMENTS, (1991) 11 (3), 465-476.  
CODEN: SCALDC. ISSN: 0240-8813.  
FILE SEGMENT: BA; OLD  
LANGUAGE: English  
AB The lactic bacterium *Leuconostoc mesenteroides* NRRL B-1355 secretes small  
amounts of alternansucrase (EC 2.4.1.140). This glucosyltransferase  
catalyses the synthesis of alternan, a high molecular weight  
.alpha.-D-glucan in which the glucose residues from sucrose are linked by  
alternating .alpha.(1-6) and .alpha.(1-3)  
glucosidic linkages. As other glucosyltransferases produced by *Leuconostoc*  
sp., alternansucrase transfers glucose molecules to appropriate acceptors

such as maltose. Alternansucrase is more thermostable than the dextranucrase also produced by *L. mesenteroides* NRRL B-1355. This difference in thermostability allows the elimination of dextranucrase activity in the enzymatic preparation containing alternansucrase. This paper describes the use of a partially purified alternansucrase for the synthesis of oligoalternans. The enzymatic synthesis of oligoalternans was performed using three efficient acceptors: maltose, isomaltose and .alpha.-methylglucoside. Transfer yields were dependent on the molar ratios of sucrose and acceptor in the reaction medium. The purification of oligoalternans was achieved by enzymatic hydrolysis, eliminating linear oligodextrans, followed by ion exchange chromatography and reverse phase HPLC separation, to obtain a pure oligoalternan preparation.

=> d ibib abs 2

L88 ANSWER 2 OF 19 TEXTILETECH COPYRIGHT 2003 Inst. of Textile Technology  
on STN

ACCESSION NUMBER: 657760 TEXTILETECH  
DOCUMENT NUMBER: 200208209  
TITLE: Cotton-Like Polysaccharides.  
SOURCE: Advances in Textiles Technology, : 3, 1 page (Aug. 2002).  
CODEN: ATDDAZ  
DOCUMENT TYPE: Journal  
LANGUAGE: English

AB DuPont invented continuous filament polysaccharide fibers that have properties similar to those of cotton fibers. Contacting a sucrose aqueous solution with glucosyltransferase isolated from *Streptococcus salivarius* isolated alpha(1-3)glucoside linkages. Dissolving a polysaccharide comprising hexose units (with at least 50 percent of the units linked by one glycoside linkage) in a solvent forms a liquid crystalline solution. Wet or air gap extrusion yields fibers from the solution. Reverting the fibers back to their hydroxyl reconstituted form yields a strong filament with cotton-like properties suitable for textile applications. This product bears international patent number WO 00/43580.

=> d ibib abs 3

L88 ANSWER 3 OF 19 TEXTILETECH COPYRIGHT 2003 Inst. of Textile Technology  
on STN

ACCESSION NUMBER: 644078 TEXTILETECH  
DOCUMENT NUMBER: 200104127  
TITLE: Metabolic Engineering in Maize: The Use of Maize Grain for the Production of Novel Polymers.  
AUTHOR: Nichols S. E.; Wang T.; Dong J. G.; Zhang S.; Ranch J.  
CORPORATE SOURCE: Pioneer Hi-Bred Intern. Inc  
SOURCE: American Chemical Society, Abstracts of Papers, 221, Part 1: CELL 122, 1 page (Apr. 1-5, 2001).  
CODEN: ACSRAL  
DOCUMENT TYPE: Journal  
LANGUAGE: English

AB Genetic selection optimized maize grain to accumulate storage carbohydrates. Metabolic engineering diverted flux from the starch normally accumulated to other polymers with inherently greater values. Researchers focused on expropriating the flux of carbon to starch in maize endosperm and diverting this flux toward introduced biochemical pathways. Experiments introduced glucose polymer synthases from

Streptococcus species into maize to synthesize polymers of mixed **alpha(1->3)**, **alpha(1->6)**, **alpha(1->3,6)**, and other minor linkages. The polymerase reaction mechanism differs from most polysaccharide synthases because sucrose is the direct precursor to the polymer and no nucleotide activated sugar is involved. Incorporating single amino changes developed synthases with catalytic specificity distinct from wild type enzymes and resulted in changes in polymer molecular weight and linkages. Experiments developed a transgenic maize containing a gene encoding one of the mutant enzymes. Abstract.

=> d ibib abs 4

L88 ANSWER 4 OF 19 TEXTILETECH COPYRIGHT 2003 Inst. of Textile Technology  
on STN

ACCESSION NUMBER: 639293 TEXTILETECH  
DOCUMENT NUMBER: 200008942  
TITLE: Refining of **Cellulose Fibers**  
Removed from Water Plants, *Elodea nuttallii*, Using  
Commercial Enzymes.  
AUTHOR: Kawahara Y.; Kawashita G.; Kawarabayashi A.  
CORPORATE SOURCE: Kyoto Inst. of Technol  
SOURCE: Sen-i Gakkaishi, 56, No. 8: 416+, 5pages (Aug. 2000).  
Reference(s): 11 refs.  
CODEN: SENGAS  
DOCUMENT TYPE: Journal  
LANGUAGE: Japanese

AB The commercial enzyme pectinase PL AMANO refined the cellulosic **fibers** removed from the water plant *Elodea nuttallii*. Researchers studied the effects of enzyme treatment on the **alpha** cellulose content and molecular weight of the refined cellulosic **fibers**. Optimal treatment obtained an **alpha** cellulose content of approximately 80 percent and a viscosity average molecular weight of approximately 237,000. These low values resulted primarily from the low maturity of the cell walls of the *Elodea nuttallii* water plants. Severe enzymatic treatment lowered the molecular weight due to the slightly beta **glucosidase** activity of the commercial enzyme.

=> d ibib abs 5

L88 ANSWER 5 OF 19 TEXTILETECH COPYRIGHT 2003 Inst. of Textile Technology  
on STN

ACCESSION NUMBER: 590990 TEXTILETECH  
DOCUMENT NUMBER: 199508796  
TITLE: Cytotoxic Effect of Extracts from Tannin, Treated and  
Untreated Cotton on Human Pneumocytes.  
AUTHOR: Roepstorff V.; Sigaard T.  
CORPORATE SOURCE: Univ. of Aarhus  
SOURCE: Cotton and Other Organic Dusts: Proceedings of the  
19th Cotton and Other Organic Dusts Research  
Conference, Beltwide Cotton Conferences, : 272+, 4  
pages (Jan. 6-7, 1995). Reference(s): 14 refs.  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
NOTE: ITT Cat. No. RA 1242 .C82 C64 1995.

AB Research on the cytotoxic effects of tannin and dust from cotton on human pneumocytes extracted samples of tannin from cotton bract and samples of dust from heated and unheated cotton bales. Tannin in concentrations

between 0.1 picogram per milliliter and 100 micrograms per milliliter had no cytotoxic effect. The study used two procedures to extract the cotton dust, which yielded a water soluble extract and an alkali soluble extract. The water soluble extract had a cytotoxic effect only from the unheated cotton bales. The alkali soluble extract had a significantly higher cytotoxic effect from the heated cotton bales than from the unheated cotton bales. Because the heat treatment increased the cytotoxic potential, endotoxin cannot be the only cytotoxic agent. The presence of a water soluble fraction and an alkali soluble fraction of  $\alpha$ -1,3-D-glucans may explain this phenomenon.

=> d ibib abs hitstr 6

L88 ANSWER 6 OF 19 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 2003:424469 HCAPLUS

DOCUMENT NUMBER: 139:6073

TITLE: Cyclic tetrasaccharide for inhibition of decrease of active oxygen-scavenging activity and its compositions suitable for foods, cosmetics, and pharmaceuticals

INVENTOR(S): Oku, Kazuyuki; Kubota, Norio; Fukuda, Shigeharu; Miyake, Toshio

PATENT ASSIGNEE(S): Hayashibara Biochemical Laboratories, Inc., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 15 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003160495	A2	20030603	JP 2001-355273	20011120
EP 1321148	A1	20030625	EP 2002-257948	20021119

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK

US 2003108593	A1	20030612	US 2002-299678	20021120
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PRIORITY APPLN. INFO.: JP 2001-355273 A 20011120

AB Plant-derived active O-scavenging substances are mixed with cyclo[ $\alpha$ -D-glucopyranosyl-(1.fwdarw.3

$\alpha$ -D-glucopyranosyl-(1.fwdarw.6)- $\alpha$ -D-glucopyranosyl-(1.fwdarw.3)- $\alpha$ -

$\alpha$ -D-glucopyranosyl-(1.fwdarw.6)] (I) or its mixts. with

trehalose, pullulan, and/or cyclodextrin in the presence of aq. media for inhibition of decrease of active O-scavenging activity. An aq. soln. (.apprx.100 L) contg. 4% (wt./vol.) phytoglycogen from corn was treated with an enzyme prepn. (contg.  $\alpha$ -isomaltosylglucosaccharide-producing enzyme and  $\alpha$ -isomaltosyltransferase, produced by *Bacillus globisporus*) at 30.degree. and pH 6.0 for 48 h and the reaction mixt. was purified to give 1170 g I of .gtoreq.99.9% purity. A powd. compn. contg. carrot 47.9, I 45.7, and H<sub>2</sub>O 6.4 wt.% showed active O-scavenging activity of 590 and 390 U/g before and after 7-day storage at 40.degree. in a sealed polystyrene container, resp., showing 66% residual activity after storage. Formulation examples of food compns., nutrient compns., cosmetics, bath prepn., and ointments are given.

IT 9057-02-7, Pullulan

RL: BSU (Biological study, unclassified); COS (Cosmetic use); FFD (Food or feed use); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(cyclic tetrasaccharide and its compns. for inhibition of decrease of

active oxygen-scavenging activity of plant-derived substances for  
foods, cosmetics, and pharmaceuticals)

RN 9057-02-7 HCAPLUS

CN Pullulan (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

=> d ibib abs hitstr ind 7-16

L88 ANSWER 7 OF 19 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 2001:271373 HCAPLUS

DOCUMENT NUMBER: 135:43205

TITLE: In situ localization of .beta.-glucans in the cell  
wall of Schizosaccharomyces pombe

AUTHOR(S): Humbel, Bruno M.; Konomi, Mami; Takagi, Tomoko;  
Kamasawa, Naomi; Ishijima, Sanae A.; Osumi, Masako

CORPORATE SOURCE: Department of Chemical and Biological Sciences,  
Faculty of Science, Japan Women's University, Tokyo,  
112-8681, Japan

SOURCE: Yeast (2001), 18(5), 433-444  
CODEN: YESTE3; ISSN: 0749-503X

PUBLISHER: John Wiley & Sons Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The chem. compn. of the cell wall of Sz. pombe is known as  
.beta.-1,3-glucan, .beta.-1,6-glucan, .alpha.-1,  
3-glucan and .alpha.-galactomannan; however, the three-dimensional  
interactions of those macromols. have not yet been clarified.  
Transmission electron microscopy reveals a three-layered structure: the  
outer layer is electron-dense, the adjacent layer is less dense, and the  
third layer bordering the cell membrane is dense. In intact cells of Sz.  
pombe, the high-resoln. scanning electron microscope reveals a surface  
completely filled with .alpha.-galactomannan particles. To better  
understand the organization of the cell wall and to complement our  
previous studies, we set out to locate the three different types of  
.beta.-glucan by immuno-electron microscopy. Our results suggest that the  
less dense layer of the cell wall contains mainly .beta.-1,6-branched  
.beta.-1,3-glucan. Occasionally a line of gold particles can be seen,  
labeling fine filaments radiating from the cell membrane to the  
.alpha.-galactomannan layer, suggesting that some of the radial  
filaments contain .beta.-1,6-branched .beta.-1,3-glucan.  
.beta.-1,6-Glucan is preferentially located underneath the  
.alpha.-galactomannan layer. Linear .beta.-1,3-glucan is exclusively  
located in the primary septum of dividing cells. .beta.-1,6-Glucan only  
labels the secondary septum and does not co-localize with linear  
.beta.-1,3-glucan, while .beta.-1,6-branched .beta.-1,3-glucan is present  
in both septa. Linear .beta.-1,3-glucan is present from early stages of  
septum formation and persists until the septum is completely formed; then  
just before cell division the label disappears. From these results we  
suggest that linear .beta.-1,3-glucan is involved in septum formation and  
perhaps the sepn. of the two daughter cells. In addn., we frequently  
found .beta.-1,6-glucan label on the Golgi app., on small vesicles and  
underneath the cell membrane. These results give fresh evidence for the  
hypothesis that .beta.-1,6-glucan is synthesized in the endoplasmic  
reticulum-Golgi system and exported to the cell membrane.

IT 9051-97-2

RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(in situ localization of .beta.-glucans in cell wall of  
Schizosaccharomyces pombe)

RN 9051-97-2 HCAPLUS  
 CN .beta.-D-Glucan, (1.fwdarw.3)- (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CC 10-1 (Microbial, Algal, and Fungal Biochemistry)

ST Schizosaccharomyces cell wall beta glucan

IT Cell membrane

Cell wall

Endoplasmic reticulum

Golgi apparatus

Schizosaccharomyces pombe

(in situ localization of .beta.-glucans in cell wall of

Schizosaccharomyces pombe)

IT 9051-97-2 37361-00-5, .beta.-1,6-Glucan 53238-80-5

97793-96-9, .alpha.-Galactomannan

RL: BSU (Biological study, unclassified); BIOL (Biological study)

(in situ localization of .beta.-glucans in cell wall of

Schizosaccharomyces pombe)

REFERENCE COUNT: 43 THERE ARE 43 CITED REFERENCES AVAILABLE FOR THIS  
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L88 ANSWER 8 OF 19 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 2000:288175 HCAPLUS

DOCUMENT NUMBER: 133:103862

TITLE: Development and applications of new generation food  
**fibers**

AUTHOR(S): Mathur, N. K.; Nagori, B. P.; Mathur, V.

CORPORATE SOURCE: Department of Chemistry, J.N. University, Jodhpur,  
 India

SOURCE: Trends in Carbohydrate Chemistry (1999), 5, 109-115  
 CODEN: TCHCFX

PUBLISHER: Surya International Publications

DOCUMENT TYPE: Journal; General Review

LANGUAGE: English

AB Among the various polysaccharides (PS), present in food only starches  
 (amylose and amylopectins) are metabolized, via glucose and serve as an  
 energy source. Cellulose and most other sol. or insol. polysaccharides  
 are either excreted undigested, or are partially fermented by the Colomic  
 flora to produce short chain fatty acids. These non-starch  
 polysaccharides have important physiol. function and are referred as food-  
**fibers** or bulking agents. Sol. food **fibers** can modulate  
 sugar and lipid metab. by slowing down their absorption from intestine.  
 During industrial processing and packaging of food, a part of the natural  
 food **fiber** is lost. It is now being increasingly realized that  
 this loss should be replenished by adding extra **fiber** to  
 packaged food. Besides its clin. requirements food **fibers** help  
 in smooth bowel motion by controlling diarrhea and constipation. There  
 has been an increasing demand for new generation designer's food  
**fibers** by food processing industry. Besides acting as a low  
 calorie bulking agent in dietetic food, a food **fiber** can also act  
 as a sugar and fat substitute. Modified (depolymd.) gum galactomannan  
 have proved to be most useful food **fibers** and is being produced  
 com. In most of the developed countries, guar based food **fibers**  
 have been given FDA clearance. Food **fibers** have been recognized  
 as having nutritional functions, rather than being mere food additives.  
 Besides guar based food **fibers**, many other polysaccharides e.g.  
 those from oat-bran mixed (.beta.-1 .fwdarw. 4 and .alpha.-  
 1 .fwdarw. 3 glucans) and other seed bran  
 (cell wall gum from corn, wheat, barley, soybeans, beet, konjack and  
 chicor of tubers etc.), exudate gums (gum arabic), pectins, hemicelluloses



(tamarind gum, psyllium husk) have also been shown to act as food **fibers**. A general review with no refs. on food **fibers**, esp. those derived from guar gum.

IT 9000-30-0, Guar gum

RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(development and applications of new generation food **fibers**  
form)

RN 9000-30-0 HCAPLUS

CN Guar gum (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CC 17-0 (Food and Feed Chemistry)

ST review food additive development application

IT Food additives

(development and applications of new generation food **fibers**  
as)

IT 9000-30-0, Guar gum

RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(development and applications of new generation food **fibers**  
form)

L88 ANSWER 9 OF 19 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1997:338217 HCAPLUS

DOCUMENT NUMBER: 127:50907

TITLE: X-ray study of beijeran sodium salts, a new  
galacturonic acid-containing exo-polysaccharide

AUTHOR(S): Ogawa, Kozo; Yui, Toshifumi; Nakata, Kunihiro; Kakuta,  
Mariko; Misaki, Akira

CORPORATE SOURCE: Research Institute for Advanced Science and  
Technology, Osaka Prefecture University, Osaka, 593,  
Japan

SOURCE: Carbohydrate Research (1997), 300(1), 41-45  
CODEN: CRBRAT; ISSN: 0008-6215

PUBLISHER: Elsevier

DOCUMENT TYPE: Journal

LANGUAGE: English

AB X-Ray **fiber** diffraction patterns were obtained from oriented  
films of sodium salts of a new uronic acid-contg. polysaccharide  
(beijeran) both in its native, poly (.fwdarw.3)-.alpha.-D-GalA-  
(1.fwdarw.3)-.beta.-L-Rha-(1.fwdarw.3)-.

**alpha.-D-Glc-06Ac-(1.fwdarw.)**, and deacetylated forms.

Initially the stretched films of both polysaccharides were amorphous, but  
the crystallinity was much improved by annealing at high temp. The  
deacetylated specimen had higher crystallinity than the native. Both  
films showed similar X-ray **fiber** patterns indicating that these  
polysaccharides had similar unit cell dimensions and that the O-acetyl  
groups in the native beijeran chain did not disturb the regular array in  
the crystal having space group P21. All the visible reflections could be  
indexed in terms of a monoclinic unit cell with dimensions a = 1.277, b =  
1.611, c (**fiber** axis) = 2.437 nm, and .gamma. = 96.79.degree..

The **fiber** axis length and the presence of (002) and (006)  
reflections indicated that the conformation was made up of two  
trisaccharide residues, in an extended two-fold helix.

CC 33-8 (Carbohydrates)

Section cross-reference(s): 75

ST conformation beijeran sodium galacturonic polysaccharide; crystal mol  
structure galacturonic acid polysaccharide

IT Polysaccharides, preparati n

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(contg. uronic acid; crystal structure and conformation of galacturonic

- acid-contg. exo-polysaccharide beijeran sodium salt)
- IT Conformation  
Crystal structure  
Molecular structure  
(crystal structure and conformation of galacturonic acid-contg. exo-polysaccharide beijeran sodium salt)
- IT Uronic acids  
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(galacturonic acid-contg. exo-polysaccharide; crystal structure and conformation of galacturonic acid-contg. exo-polysaccharide beijeran sodium salt)
- IT 191164-98-4P 191164-99-5P  
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(repeating units; crystal structure and conformation of galacturonic acid-contg. exo-polysaccharide beijeran sodium salt)
- L88 ANSWER 10 OF 19 HCAPLUS COPYRIGHT 2003 ACS on STN
- ACCESSION NUMBER: 1996:198381 HCAPLUS
- DOCUMENT NUMBER: 124:290068
- TITLE: Chain conformation of deacetylated beijeran calcium salt
- AUTHOR(S): Ogawa, Kozo; Yui, Toshifumi; Nakata, Kunihiro; Nitta, Yasunori; Kakuta, Mariko; Misaki, Akira
- CORPORATE SOURCE: Research Inst. for Advanced Science and Technology, Osaka Prefecture University, Osaka, 593, Japan
- SOURCE: Bioscience, Biotechnology, and Biochemistry (1996), 60(3), 551-3  
CODEN: BBBIEJ; ISSN: 0916-8451
- PUBLISHER: Japan Society for Bioscience, Biotechnology, and Agrochemistry
- DOCUMENT TYPE: Journal
- LANGUAGE: English
- AB A well-defined X-ray fiber diffraction pattern was obtained from a stretched film of the calcium salt of a new uronic acid contg. polysaccharide designated as beijeran in the deacetylated form, poly[.fwdarw.3)-.alpha.-D-GalUA-(1.fwdarw.3)-.beta.-L-Rham-(1.fwdarw.3)-.alpha.-D-Glc(1.fwdarw.)]. The oriented film showed no diffraction spots, indicating it to be amorphous. However, when annealed at high temp., the film exhibited high crystallinity. All the visible reflections could be indexed in terms of a monoclinic unit cell with the following dimensions: .alpha. = 1.297; b = 1.676; c (fiber axis) = 2.509 nm; and .gamma. = 106.50.degree.. The length of the fiber axis and the absence of meridional reflections at any odd layer line indicate that an extended two-fold helical conformation was made up to two trisaccharide residues.
- CC 33-5 (Carbohydrates)  
Section cross-reference(s): 75
- ST beijeran deacetylated conformation crystal structure Azotobacter
- IT Azotobacter beijerinckii  
(TNM 1; chain conformation of deacetylated beijeran calcium salt)
- IT Nomenclature, new natural products  
(beijeran (polysaccharide); chain conformation of deacetylated beijeran calcium salt)
- IT Polysaccharides, properties  
RL: MSC (Miscellaneous); PRP (Properties)  
(beijerans)
- IT Crystal structure  
(chain conformation of deacetylated beijeran calcium salt)
- IT Conformation and Conformers  
(two-fold helical; chain conformation of deacetylated beijeran calcium

salt)  
 IT 158636-04-5  
 RL: MSC (Miscellaneous); PRP (Properties)  
 (Azotobacter beijerinckii uronic acid-contg. polysaccharide, bejieran,  
 its conformation, and crystal structure anal. of deacetylated bejieran  
 calcium salt)

L88 ANSWER 11 OF 19 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1984:86024 HCAPLUS

DOCUMENT NUMBER: 100:86024

TITLE: X-ray diffraction data for (1 .

**fwdarw. 3)-.alpha.-**

**D-glucan triacetate**

AUTHOR(S): Ogawa, Kozo; Okamura, Keizo; Yui, Toshifumi; Watanabe,  
 Takehiko; Takeo, Kenichi

CORPORATE SOURCE: Radiat. Cent. Osaka Prefect., Sakai, 593, Japan

SOURCE: Carbohydrate Polymers (1983), 3(4), 287-97

CODEN: CAPOD8; ISSN: 0144-8617

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The crystal structures (1 .**fwdarw. 3)-.alpha.-D**

**glucan triacetates** were studied by x-ray  
 diffraction measurements on **fiber** diagrams. The oriented films  
 annealed in water at high temp. were of higher crystallinity and occurred  
 as two cryst. polymorphs (GTA I and GTA II) depending on the samples and  
 also the annealing temp. The **fiber** repeat data coupled with the  
 d. data and the presence of only the (003) reflection on the meridian  
 suggested an extended three-fold helical structure for GTA I. GTA I had  
 an orthorhombic unit cell, whereas that of GTA II was monoclinic. A  
 similar three-fold structure to GTA I was proposed from the almost  
 identical **fiber** repeat and the conformational anal. on (1 .**fwdarw. 3)-.alpha.-D**  
**glucan**. On acetylation, the D-glucan structure changed from the fully  
 extended two-fold helix to the extended three-fold accompanied by some  
 extent of chain shrinking.

CC 33-5 (Carbohydrates)

Section cross-reference(s): 22, 75

ST crystal structure glucan triacetate; glucan conformation acetylation

IT Polysaccharides, properties

RL: PRP (Properties)

(crystal structure of glucan triacetate)

IT Acetylation

(effect of, on conformation of glucan)

IT Crystal structure

(of glucan triacetate)

IT Conformation and Conformers

(of glucan, effect of acetylation on)

IT 88813-79-0

RL: PRP (Properties)

(crystal structure of)

L88 ANSWER 12 OF 19 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1982:198130 HCAPLUS

DOCUMENT NUMBER: 96:198130

TITLE: Isolation, purification and characterization of a  
 complex heteroxylan from industrial wheat bran

AUTHOR(S): Brillouet, Jean Marc; Joseleau, Jean Paul; Utille,  
 Jean Pierre; Lelievre, Dominique

CORPORATE SOURCE: Cent. Rech. Agro-Aliment., Inst. Natl. Rech. Agron.,  
 Nantes, 44072, Fr.

SOURCE: Journal of Agricultural and Food Chemistry (1982),  
30(3), 488-95  
CODEN: JAFCAU; ISSN: 0021-8561

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A complex hemicellulosic heteroxylan [9040-27-1] was isolated from industrial wheat bran and was mainly constituted of equiv. amts. of arabinose and xylose. Minor quantities of galactose, glucose, and uronic acid were also present. Wheat bran heteroxylan showed a highly branched structure characterized by a .beta.-(1.fwdarw.4)-xylan backbone branched by very short side chains of .alpha.-(1.fwdarw.2)- and .alpha.-(1.fwdarw.3)-linked arabinose and several doubly branched xylosyl residues carrying single terminal arabinosyl units. Glucuronic acid and its 4-O-Me ether are also present in terminal nonreducing positions on side chains. This highly branched structure could be related to the strong water retention power exhibited by wheat bran.

IT 9040-27-1

RL: PROC (Process)

(of wheat bran, characterization of)

RN 9040-27-1 HCAPLUS

CN Arabinoxylan (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CC 17-11 (Food and Feed Chemistry)

ST bran heteroxylan characterization; wheat bran heteroxylan characterization; dietary fiber heteroxylan characterization

IT Carbohydrates and Sugars, biological studies

RL: BIOL (Biological study)

(of wheat bran heteroxylan, characterization of)

IT Polysaccharides, biological studies

RL: BIOL (Biological study)

(of wheat bran, characterization of)

IT Dietary fiber

(wheat bran as, heteroxylan characterization from)

IT 9040-27-1

RL: PROC (Process)

(of wheat bran, characterization of)

L88 ANSWER 13 OF 19 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1982:31641 HCAPLUS

DOCUMENT NUMBER: 96:31641

TITLE: Plant mucilages. XXIX. Isolation and characterization of a mucous polysaccharide, "Plantago-mucilage A," from the seeds of Plantago major var. asiatica

AUTHOR(S): Tomoda, Masashi; Yokoi, Maemi; Ishikawa, Kazuyo

CORPORATE SOURCE: Kyoritsu Coll. Pharm., Tokyo, 105, Japan

SOURCE: Chemical & Pharmaceutical Bulletin (1981), 29(10), 2877-84

CODEN: CPBTAL; ISSN: 0009-2363

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A representative mucous polysaccharide, named Plantago-mucilage A, was isolated from the seeds of P. major var asiatica (=P. asiatica). The final prepn. was homogeneous as detd. by ultracentrifugal anal., glass-fiber electrophoresis, and gel chromatog. It was readily sol. in water and its soln. gave an intrinsic viscosity value of 39.5. It was composed of L-arabinose, D-xylose, D-glucuronic acid, and D-galacturonic acid in the molar ratio of 4.0:10.8:3.3:0.7, and its mol. wt. was estd. as

.apprx.1,500,000. O-Acetyl groups were identified in it and their content amounted to 4.8%. Redn. of carboxyl groups, methylation anal., controlled Smith degridn, and partial acid hydrolysis studies showed that the mucilage possesses a main chain composed of .beta.-1.fwdarw.4 linked D-xylopyranose residues having other D-xylopyranose side chains at position 3 and branches composed of O-.alpha.-(D-glucopyranosyluronic acid)-(1.fwdarw.3)-.alpha.-L-arabinofuranose and of O-.alpha.-(D-galactopyranosyluronic acid)-(1.fwdarw.3)-.alpha.-L-arabinofuranose at position 2 of the residual D-xylopyranose units.

- CC 11-1 (Plant Biochemistry)
- ST Plantago mucilage A isolation
- IT Molecular structure, natural product  
(Plantago mucilage A (polysaccharide))
- IT Gums and Mucilages  
Polysaccharides, biological studies  
RL: BIOL (Biological study)  
(from Plantago major asiatica seeds, isolation and characterization of)
- IT Plantain  
(P. major asiatica, mucilage of seeds of, isolation and  
characterization of)
- IT 37187-94-3  
RL: BIOL (Biological study)  
(isolation and characterization of)
- IT 58-86-6, biological studies 685-73-4 5328-37-0 6556-12-3  
RL: BIOL (Biological study)  
(of Plantago mucilage A)

L88 ANSWER 14 OF 19 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1974:548172 HCAPLUS  
DOCUMENT NUMBER: 81:148172  
TITLE: Chemical and ultrastructural studies on the cell walls  
of the yeastlike and mycelial forms of *Histoplasma*  
*farciminosum*  
AUTHOR(S): San-Blas, Gioconda; Carbonell, Luis M.  
CORPORATE SOURCE: Cent. Microbiol. Cell Biol., Inst. Venez. Invest.  
Cient., Caracas, Venez.  
SOURCE: Journal of Bacteriology (1974), 119(2), 602-11  
CODEN: JOBAAAY; ISSN: 0021-9193  
DOCUMENT TYPE: Journal  
LANGUAGE: English

- AB The cell wall of the yeast form of *H. farciminosum* contains 13.2% .beta.-1,3-glucan, 1.0% galactomannan, and 25.8% chitin, whereas the cell wall of the mycelial form has 21.8, 4.5, and 40%, resp., for the same polymers. Also, the cell wall of the yeast form contains .alpha.-1,3-glucan (13.5%) and an unidentified polymer (21.5%). Chitin, one of the structural polymers of both yeast and mycelial cell walls, is identified as thin isolated fibers (4 nm wide) or in thick bundles (50 nm wide) of fibers. .beta.-(1,3)-Glucan is also found as thin isolated fibers indistinguishable from isolated fibers of chitin. Fibers 14 nm wide and resembling .alpha.-(1,3)-glucan fibers of other fungi are found in the yeast form. The results reported here do not give support to the proposal for a different taxonomic classification.
- IT 1398-61-4 9051-97-2  
RL: BIOL (Biological study)  
(of cell wall of *Histoplasma farciminosum*)
- RN 1398-61-4 HCAPLUS
- CN Chitin (8CI, 9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

RN 9051-97-2 HCAPLUS

CN .beta.-D-Glucan, (1.fwdarw.3)- (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CC 10-1 (Microbial Biochemistry)

ST chitin glucan Histoplasma cell wall

IT Histoplasma farciminosum

(cell wall of yeastlike and mycelial forms of)

IT Cell wall

(of Histoplasma farciminosum yeastlike and mycelial forms)

IT 1398-61-4 9051-97-2

RL: BIOL (Biological study)

(of cell wall of Histoplasma farciminosum)

L88 ANSWER 15 OF 19 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1975:70139 HCAPLUS

DOCUMENT NUMBER: 82:70139

TITLE: Chemical and ultrastructural studies on the cell walls of the yeastlike and mycelial forms of Histoplasma capsulatum

AUTHOR(S): Kanetsuna, F.; Carbonell, L. M.; Gil, F.; Azuma, I.

CORPORATE SOURCE: Cent. Microbiol. Cell Biol., Inst. Venez. Invest. Cient., Caracas, Venez.

SOURCE: Mycopathologia & Mycologia Applicata (1974), 54(1), 1-13

CODEN: MMAPAP; ISSN: 0027-5530

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Chem. and ultrastructural studies of the cell walls of the yeast-like and mycelial forms of H. capsulatum G-184B revealed that the yeastlike form contained .apprx.46.5% of .alpha.-glucan, 31.0% of .beta.-glucan, 7.7% of galactomannan, and 11.5% of chitin. The cell wall of the mycelial form contained .apprx.18.8% of .beta.-glucan 24.7% of galactomannan, 25.8% of chitin, and essentially no .alpha.-glucan. The .alpha.-glucan of the yeastlike form contained mainly an .alpha.-(1.fwdarw.3)-linkage. The .beta.-glucans of both forms have a .beta.-(1.fwdarw.3)-linkage. Chitin microfibrils were located primarily in the inner portion of the cell walls of the yeastlike and mycelial forms, whereas the .alpha.-glucan fibers were obsd. only in the outer portion of the yeastlike form cell wall.

IT 1398-61-4 9041-22-9 11078-30-1

RL: BIOL (Biological study)

(of cell walls of Histoplasma capsulatum)

RN 1398-61-4 HCAPLUS

CN Chitin (8CI, 9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

RN 9041-22-9 HCAPLUS

CN .beta.-D-Glucan (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

RN 11078-30-1 HCAPLUS

CN D-Galacto-D-mannan (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CC 10-1 (Microbial Biochemistry)

ST carbohydrate cell wall histoplasma

IT Histoplasma capsulatum

(compn. and structure of cell walls of)  
 IT Cell wall  
 (compn. and structure of, of Histoplasma)  
 IT 1398-61-4 9041-22-9 9074-78-6 11078-30-1  
 RL: BIOL (Biological study)  
 (of cell walls of Histoplasma capsulatum)

L88 ANSWER 16 OF 19 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1955:69346 HCAPLUS  
 DOCUMENT NUMBER: 49:69346  
 ORIGINAL REFERENCE NO.: 49:13322a-c  
 TITLE: X-ray and infrared studies on carrageenin  
 AUTHOR(S): Bayley, S. T.  
 CORPORATE SOURCE: Natl. Research Labs., Ottawa, Can.  
 SOURCE: Biochimica et Biophysica Acta (1955), 17, 194-205  
 CODEN: BBACAQ; ISSN: 0006-3002  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Unavailable

AB X-ray diffraction patterns were obtained for stretched **fibers** of whole carrageenin (I) and its .kappa.- (II) and .lambda.- (III) components. A **fiber** period of 25.2 A. was proposed for all 3 substances. The I mol. appeared to contain 2 trisaccharide units each comprising 2 sulfated D-galactose (IV) residues linked .alpha.- 1,3- and one 3,6-anhydro-D-galactose (V) residue linked .beta.-1,4-, and within each 25.2 A. period one side residue of V linked to the main chain through C6 of a sulfated IV residue. In III the **fiber** period seemed to represent 3 disaccharide units the majority of which consisted of 2 sulfated IV residues linked .alpha.- 1,3-. The long **fiber** period could be accounted for by a variation in the no. of sulfate groups attached to the IV residues or by the presence of side residues. Comparison of the diffraction patterns for I, II, and III indicated that in I the 2 types of mols. exist in a distinct and definite structural relationship with respect to each other and cannot occur as large separate aggregates.

IT 9000-07-1, Carrageenin  
 (structure of)  
 RN 9000-07-1 HCAPLUS  
 CN Carrageenan (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CC 11A (Biological Chemistry: General)  
 IT Trisaccharides  
 (of carrageenin)  
 IT Molecules  
 (structure of, of carrageenin)  
 IT Galactose  
 (sulfated, in trisaccharide of carrageenin)  
 IT 14122-18-0, Galactose, 3,6-anhydro-, D-  
 (in trisaccharide of carrageenin)  
 IT 9000-07-1, Carrageenin  
 (structure of)

=> d ibib abs 17-19

L88 ANSWER 17 OF 19 WPIX COPYRIGHT 2003 THOMSON DERWENT on STN  
 ACCESSION NUMBER: 2000-524245 [47] WPIX  
 DOC. NO. CPI: C2000-155683  
 TITLE: New **polysaccharide fiber**, useful for  
**textiles**, comprises a polyglucose with

alpha 1-3 glycosidic links,  
 able to form a liquid crystalline solution for spinning.  
 DERWENT CLASS: A11 D16 F01  
 INVENTOR(S): O'BRIEN, J P  
 PATENT ASSIGNEE(S): (DUPO) DU PONT DE NEMOURS & CO E I  
 COUNTRY COUNT: 81  
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2000043580	A1	20000727	(200047)*	EN	23
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL					
OA PT SD SE SL SZ TZ UG ZW					
W: AE AL AU BA BB BG BR CA CN CR CU CZ EE GD GE HR HU ID IL IN IS JP					
KP KR LC LK LR LT LV MG MK MN MX NO NZ PL RO SG SI SK SL TR TT UA					
US UZ VN YU ZA					
AU 2000025097	A	20000807	(200055)		
EP 1165867	A1	20020102	(200209)	EN	
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT					
RO SE SI					
KR 2001101647	A	20011114	(200230)		
JP 2002535501	W	20021022	(200301)		30
TW 504525	A	20021001	(200337)		

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2000043580	A1	WO 2000-US1160	20000119
AU 2000025097	A	AU 2000-25097	20000119
EP 1165867	A1	EP 2000-903335	20000119
		WO 2000-US1160	20000119
KR 2001101647	A	KR 2001-709271	20010724
JP 2002535501	W	JP 2000-594981	20000119
		WO 2000-US1160	20000119
TW 504525	A	TW 2000-101178	20000125

## FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 2000025097	A Based on	WO 200043580
EP 1165867	A1 Based on	WO 200043580
JP 2002535501	W Based on	WO 200043580

PRIORITY APPLN. INFO: US 1999-117209P 19990125

AN 2000-524245 [47] WPIX

AB WO 200043580 A UPAB: 20000925

NOVELTY - A polysaccharide fiber (A), is new and  
 comprises a polymer (I) containing hexose units, at least 50% of which are  
 linked via alpha (1-3) glycosidic links, and  
 having number average degree of polymerization at least 100.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the  
 following:

(1) preparation of (A); and

(2) a liquid crystalline solution (B) containing (A) in a solvent.

USE - (A) has 'cotton-like' properties and is useful in  
 textiles.

ADVANTAGE - (A) can be produced all year round, at low cost from  
 renewable resources ((I) are produced from sucrose), are biodegradable and



when dissolved as a liquid crystalline solution, may be spun to a continuous, highly oriented and crystalline, high-strength fiber, optionally in derivatized or regenerated form.  
Dwg.0/1

L88 ANSWER 18 OF 19 WPIX COPYRIGHT 2003 THOMSON DERWENT on STN

ACCESSION NUMBER: 2000-387040 [33] WPIX  
CROSS REFERENCE: 2000-375942 [32]; 2000-375944 [32]  
DOC. NO. CPI: C2000-117352  
TITLE: **Fabric care composition comprises fabric improving active comprising oligosaccharides.**

DERWENT CLASS: A14 A26 A97 D17 D25 E11  
INVENTOR(S): BARNABAS, M V; TORDIL, H B; TRINH, T  
PATENT ASSIGNEE(S): (PROC) PROCTER & GAMBLE CO  
COUNTRY COUNT: 91  
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2000024851	A2	20000504	(200033)*	EN	155
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ TZ UG ZW					
W: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZA ZW					
AU 2000012231	A	20000515	(200039)		
EP 1144572	A2	20011017	(200169)	EN	
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI					
JP 2002528652	W	20020903	(200273)		223

#### APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2000024851	A2	WO 1999-US24824	19991022
AU 2000012231	A	AU 2000-12231	19991022
EP 1144572	A2	EP 1999-971022	19991022
		WO 1999-US24824	19991022
JP 2002528652	W	WO 1999-US24824	19991022
		JP 2000-578406	19991022

#### FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 2000012231	A Based on	WO 200024851
EP 1144572	A2 Based on	WO 200024851
JP 2002528652	W Based on	WO 200024851

PRIORITY APPLN. INFO: US 1998-105375P 19981023

AN 2000-387040 [33] WPIX

CR 2000-375942 [32]; 2000-375944 [32]

AB WO 200024851 A UPAB: 20021113

NOVELTY - A **fabric** care composition comprises a **fabric** improving active, an adjunct wrinkle control agent; (C) optionally a surfactant; (D) optionally an odor control agent; (E) optionally a perfume; (F) optionally an antimicrobial active agent; (G) optionally an

aminocarboxylate chelator; (H) optionally an antimicrobial active; and (I) optionally, an aqueous carrier.

DETAILED DESCRIPTION - A **fabric care composition** comprises:

(A) **fabric improving active**; (B) optionally, to remove and/or reduce wrinkles, an adjunct wrinkle control agent; (C) optionally, to reduce surface tension, and/or to improve performance and formulatability, an effective amount of surfactant; (D) optionally, an effective amount to absorb malodor, of odor control agent; (E) optionally, a perfume; (F) optionally, antimicrobial active; (G) optionally, an effective amount, to provide improved antimicrobial action, of aminocarboxylate chelator; (H) optionally an antimicrobial active; and (I) optionally, an aqueous carrier. The composition is free of any material that would soil or stain **fabric** under usage conditions. (A) comprises 0.001-20 (0.1-5, 0.1-1) wt % of the **fabric care composition**, or for concentrated **fabric care compositions**, 1-99 (1-40, 2-15) wt.% of **fabric improving active** comprising, (i) **oligosaccharides** with a degree of polymerisation of 1-15, where each monomer is selected from a **saccharide** containing 5 or 6 C atoms, more preferably comprising **isomaltooligosaccharides** with a degree of polymerisation of 2-10, where the glucose units are linked by alpha- and/or beta-linkages, even more preferably comprising **isomaltooligosaccharides**, contain 3-7 glucose units which are linked by 1,2-alpha, 1, 3-alpha, 1,4-alpha, and 1,6-alpha-linkages, and mixtures of these linkages; and/or (ii) **oligosaccharides** with a degree of polymerisation of 1-15, where each monomer is selected from a **saccharide** containing 5 or 6 carbon atoms, more preferably **oligosaccharides** selected from isomaltotriose, isomaltotetraose, **isomaltooligosaccharide**, **fructooligosaccharide**, **levoooligosaccharide**, **galactooligosaccharide**, **xylooligosaccharide**, **gentiooligosaccharide**, **disaccharides**, glucose, fructose, galactose, xylose, mannose, arabinose, rhamnose, maltose, sucrose, lactose, maltulose, ribose, lyxose, allose, altrose, gulose, idose, talose, trehalose, nigerose, kojibiose, lactulose, **oligosaccharide**, **maltooligosaccharide**, **trisaccharides**, **tetrasaccharides**, **pentasaccharides**, **hexasaccharides**, **oligosaccharides** from partial hydrolysates of natural **polysaccharide** sources, and mixtures thereof. INDEPENDENT CLAIMS are also provided for: (a) an article of manufacture comprising the **fabric care composition** in a package in association with instructions for use which direct the consumer to apply at least an effective amount of the **fabric improving active** to provide at least one of the **fabric care benefits**; (b) a **fabric**, preferably a cellulosic **fabric**, having improved characteristics having an effective amount of **fabric improving active** attached thereto; and (c) a method for providing a **fabric** with **fabric care benefit** using the above.

USE - The composition provides a **fabric care composition** which is applied to **fabrics** during wash, rinse or drying cycles.

ADVANTAGE - The composition provides the following **fabric care benefits**, wrinkle removal and/or reduction, **fabric wear reduction**, **fabric pilling reduction**, **fabric color fading reduction**, **fabric color maintenance**, **fabric color restoration**, **fabric soiling reduction**, **fabric shape retention**, and/or **fabric shrinkage reduction**.  
Dwg.0/0

L88 ANSWER 19 OF 19 WPIX COPYRIGHT 2003 THOMSON DERWENT on STN  
ACCESSION NUMBER: 1979-30019B [16] WPIX  
TITLE: Prods. based on new alpha-glucane - derived

from sugars by action of microorganisms of Elsinoe strain.

DERWENT CLASS: A11 D16 D17 F01 P15 Q32 Q34  
 INVENTOR(S): SUGIMOTO, T; YOKOBAYASH, K  
 PATENT ASSIGNEE(S): (HAYB) HAYASHIBARA SEIBUTSU KAGAKU  
 COUNTRY COUNT: 5  
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
DE 2842855	A	19790412	(197916)*		
GB 2007245	A	19790516	(197920)		
JP 54052793	A	19790425	(197923)		
FR 2404655	A	19790601	(197927)		
US 4306059	A	19811215	(198201)		
GB 2007245	B	19830112	(198302)		
DE 2842855	C	19840510	(198420)		
JP 60054322	B	19851129	(198601)		

PRIORITY APPLN. INFO: JP 1977-117667 19770930

AN 1979-30019B [16] WPIX

AB DE 2842855 A UPAB: 19930901

Prods. are composed of or contain a new alpha-glucane (elsinan) with recurring units of formula

3)-Glc-(1 right arrow 4)-Glc-(1 right arrow 4)-Glc-(1 right arrow (in which Glc is an alpha-D-glucopyranose gp.)

The main structure is almost linear, with three alpha-1,4 linked glucose gps. (i.e. maltotriose units) linked in succession through alpha-1,3 Bonds, and also contains some maltotetrose units.

Used as granulate, fibres, yarns, films, papers, sponges, tubes, coatings, etc. in the foodstuffs, clothing, furnishing, building, agriculture and fishing industries, and as technical prods. for chemicals, cosmetics and pharmaceuticals. Elsinan is more stable than amylose and less water-sensitive than pullulan. It is soluble in hot water, transparent, non-toxic, edible and can be stored for long periods without change in properties. Films are tough, flexible, oil-resistant, impermeable to air and oxygen and have good electrical insulating properties.

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